Plate 6.

Callimerus arcufer Chapin.

Fig. 12. Larva. Dorsal view.
Fig. 13. Pygidial shield and urogomphi. Dorsal view.
Fig. 14. Eighth and ninth abdominal segments, with separate figure of extended tenth abdominal segment. Lateral view.
Fig. 15. Anterior part of body. Lateral view.
Fig. 16. Pupa. Ventral view.
Fig. 17. Head. Dorsal view.
Fig. 18. Right antenna and five ocelli in two groups on the right side of the head.
Fig. 19. Head. Ventral view.
Fig. 20a. Clypeus and labrum. Dorsal view.
Fig. 20b. Epipharynx.
Fig. 21. Right mandible. Ventral view.
Fig. 22. Left mandible. Dorsal view.
Fig. 23. End of right maxilla; mentum and labium. Ventral view. *g*-galea, *L*-labium, *M*-mentum, *pg*-palpiger.
Fig. 24. Distal end of leg. Posterior view.
Fig. 25. Seta in parasternal area.
Fig. 26. Distal end of leg. Paronychial appendix and claw bent to each side. *cl*-claw, *pon*-paronychial appendix (=empodium).
Fig. 27. Sixth and seventh abdominal segments. Ventral view. *e*-epipleurum, *hy*-hypopleurum, *past*-parasternum (=coxal area), *postl*-posternellum (=intersegmental band), *st*-eusternum, *stl*-sternellum.
Fig. 28. Seta in parasternal area.
Fig. 29. Spiracle with spiracular mouthpiece, atrium and trachea. *A*-atrium, *Tr*- spiracular trachea.
Fig. 30. Spiracle showing (1) mouthpiece with annular opening and pair of short tubes, (2) atrium. Exterior view. *A*-atrium.

THREE NEW SPECIES OF THE GENUS PEDINASPIS (HYMENOPTERA, FAM. PSAMMOCHARIDAE).

By J. R. Malloch.

Two of the species described herein were found amongst the miscellaneous unidentified material sent in by one of the field agents of the Biological Survey for the reference collection of that Bureau. As this collection is essentially intended for comparative purposes in the identification of insects found in the stomachs of birds, mammals, etc., and rare or new species are not ordinarily necessary to that end, the type specimens are deposited in the collection of the United States National Museum. The third species belongs to the United States National Museum and was given to me for description by Mr. S. A. Rohwer, being recognized by him as an undescribed species.

Pedinaspis albocaudata, new species.

Male.—Black, shining, with a violet tinge. Head with black hairs above, decumbent white hairs on face from above bases of antennae, through which the erect black hairs are evident; occiput with dense decumbent griseous, and sparse erect black hairs. Thorax and abdomen with dense violet black appressed tomentum; pronotum with some sparse erect hairs, the fine decumbent hairs on hind margin grey; pleura with a few short erect hairs; propodeum without white hairs. Third abdominal tergite with a narrow band of white decumbent hairs on dorsal portion of its hind margin, the following four tergites each with similar hairs on their entire dorsal aspect, the erect sparse black hairs longest on apical tergites. Legs violaceous black. Wings fuscous.

Head with a rounded hump on vertex behind and between ocelli; posterior ocelli separated from each other by same distance as either is from eye; clypeus rounded in front; antennae as long as thorax. Propodeum well rounded out behind, smooth. Abdominal sternites without abnormal armature. Venation as in *mariae.*

Length, 11 mm.

Type locality.—Higley, Arizona, June 27, 1917 (E. G. Holt).
Type.—Cat. No. 27432, U. S. N. M.

Pedinaspis bucephala, new species.

Male.—Similar in coloration to the preceding species, but the hairs on middle of face are brownish, not white, as are also some of those on occiput, the pronotum lacks the pale hairs on the hind margin, the tomentum of mesonotum and most of that on the dorsum of abdomen is brown, and not violet black, and there are no white hairs on abdomen at apex.

Structurally the two species are quite similar, but the head in this species is more noticeably humped on vertex than in the preceding one, and the antennae are shorter and thicker.

Length, 12 mm.

Type locality.—Palm Springs, Lakeside, Calif., August 9, 1917 (E. G. Holt).
Type.—Cat. No. 27431, U. S. N. M.

Pedinaspis brimleyi, new species.

Female.—Black, shining where abraded, otherwise dull because of the dense tomentum; abdomen with a large orange-yellow mark on dorsum of second tergite which extends from anterior margin about three-fourths of its length, and is slightly notched in middle of its posterior outline.

Head a little wider than thorax, vertex slightly raised above eyes; posterior ocelli distinctly proximad of upper margin of eyes, separated from each other by about three-fourths as great a distance as either is from eye; central depressed line faint; clypeus broadly rounded, flat on disc, a quite large conspicuous depression around bases of antennae which is rather abrupt on its lower margin, extending over upper margin of clypeus; second, third, and fourth, flagellar segments subequal. Propodeum but slightly concave posteriorly, no obvious angle on sides of hind margin; no submedian angles on hind margin of mesosternum. Abdomen as in *mariae*. Third submarginal cell subquadrate.

Length, 20 mm.

Type locality.—Raleigh, N. C., July 2, 1921 (C. S. Brimley).

Type.—Cat. No. 27433, U. S. N. M.

Named in honor of the collector.

This species superficially resembles *Psammocharis* (*Lophopompilus*) *atrox* (Dahlb.). It runs to *texanus* in Banks' key to the species of this genus but differs in having only the second abdominal tergite largely reddish, the depressions at bases of antennae much larger, and the hind margin of mesosternum more rounded

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A NECESSITY FOR TAXONOMIC WORKERS.

By Harrison G. Dyar.

Aside from generic difficulties and type fixation, it is clear when we get down to fundamentals, that the species is the ultimate unit. Nothing can be done in nomenclature without a specific name, and no specific name can be held valid without a description. A description may become inadequate in the light of future researches; but it is adequate at the time it was proposed, provided the author is competent to describe at all. In fact it would be possible to get along in taxonomy very well with nothing but specific names, provided we could think of enough different ones, using generic names only in catalogues, as we now use subfamily and family names and higher categories.

The most important thing, therefore, for taxonomic workers is the specific names based on the original descriptions. In what state do these stand? Surely in a very unsatisfactory one. Descriptions are published in every language under the sun, not only in western European tongues using the original Latin alphabet, but in the Greek languages such as Russian. We have not come across any descriptions in Arabic or Turkish, though no doubt they will arrive; but we have before us several papers describing new species purely in Japanese. The condition has been reached, theoretically at least, that every taxonomic worker must be able to read every written language on the face of the earth or he is not in a position to handle the emergencies of his subject alone, and translators are often difficult and expensive to find.